

Claims

- [c1] Provides for a less complex more efficient engine design.
- [c2] Adaptable to a variety of both current and future engine designs and applications.
- [c3] Fewer parts streamline valve train design by requiring only a few moving parts thereby replacing more than one hundred and seventy five moving parts typically found in a conventional V8 valve train design lowering both manufacturing and servicing costs.
- [c4] Significant weight reduction and reduced internal friction and power loss without the transfer of rotating to reciprocating motion required by linear valves.
- [c5] Lower speed or revolutions per minute required to operate and achieve a smooth engine idle.
- [c6] Higher revolutions per minute capability limited only by crankshaft, rod and piston assemblies vs. conventional valve train limitations subject to (valve float) and spring tension.
- [c7] More usable horsepower and torque improving power to weight ratio.

- [c8] Oil lubrication is not required above the engine block due to self-lubricating design resulting in lower oil usage and consumption, improved emissions, lower oil temperatures and increased oil life.
- [c9] Unique rotating spark plug design with its chamber-centered locating promotes more effective and complete combustion while improving spark plug life.
- [c10] Increased energy efficiency and improved fuel economy.
- [c11] Improved engine throttle response providing (quick RPM's).
- [c12] Reduced engine vibration, smoother power and quieter operation.
- [c13] Creates an encouraging new platform for both existing and future adaptation of performance enhancing components such as turbo charging, super charging, direct injection fuel delivery and advancing computer controlled engine management systems.
- [c14] Unobstructed intake and exhaust port openings provide improved air/fuel flow to combustion chambers and increased exhaust flow performance.
- [c15] Higher air/fuel intake and exhaust volumes possible with

unrestrictive port openings improving air/fuel and exhaust flow turbulence and increasing performance throughout the entire power curve.